CIVIL QUALITY CONSULTANTS & ENGINEERS

(Buildings Geo-Tech & Highway Materials Testing Laboratory)
An ISO 9001: 2008 Certified Company

JAS-ANZ
ISO 9001:2000 CERTIFIED

Job No.: CQCE/BBMP/RM/W No.13/2017-18 29.07.2017

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
Agency : **Sri. R. Mangalraj,** Contractor,Bangalore.
Name of the work : Improvements to main & Cross Road at Selection Corner area & Santhosh Nagar (Balance Roads) in Ward No. 13, in Shettyhalli Sub Division, BBMP, Bangalore.
Reference : EE/DD/W.O/128/2016-17 Dated:23.02.2017
Sample ID : Cement Concrete
Size of cubes : 150mmx150mmx150mm
Cross Sectional Area : 22500 mm^2
Technical Reference : IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete : M_{20}
Compressive Strength as on : 7th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	22.07.2017	29.07.2017	8.179	315.2	14.01
2	22.07.2017	29.07.2017	8.156	349.1	15.52
3	22.07.2017	29.07.2017	8.180	360.8	16.04

Note:
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2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Authorised Signatory

29/7

Office : # 39, 5TH Cross, Javaregowdana Doddi, Rajarajeshwarinagar, Bangalore-560098
Laboratory : # 133, Bhuvaneshwarinagar, Dodda Basti Main Road, Bangalore - 560 056.
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Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{20}
Compressive Strength as on	: 7th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	22.07.2017	29.07.2017	8.154	326.5	14.51
2	22.07.2017	29.07.2017	8.195	340.9	15.15
3	22.07.2017	29.07.2017	8.181	377.1	16.76

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Job No.: CQCE/BBMP/RM/W No.13/2017-18 19.08.2017

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
Agency : **Sri. R. Mangalraj,** Contractor,Bangalore.
Name of the work : Improvements to main & Cross Road at Selection Corner area & Santhosh Nagar (Balance Roads) in Ward No. 13, in Shettyhalli Sub Division, BBMP, Bangalore.
Reference : EE/DD/W.O/128/2016-17 Dated:23.02.2017
Sample ID : Cement Concrete
Size of cubes : 150mmx150mmx150mm
Cross Sectional Area : 22500 mm^2
Technical Reference : IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete : M_{20}
Compressive Strength as on : 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	22.07.2017	19.08.2017	8.295	529.4	23.53
2	22.07.2017	19.08.2017	8.274	510.8	22.70
3	22.07.2017	19.08.2017	8.228	492.6	21.89

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Job No.: CQCE/BBMP/RM/W No.13/2017-18 Date : 11.08.2017

ATTERBERG LIMITS TEST FOR WMM
MORTH TABLE-400-11

Client : **Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.

Agency : **Sri. R. Mangalraj,** Contractor,Bangalore.

Name of Work : Improvements to main & Cross Road at Selection Corner area & Santhosh Nagar (Balance Roads) in Ward No. 13, in Shettyhalli Sub Division, BBMP, Bangalore.

Reference : EE/DD/W.O/128/2016-17 Dated:23.02.2017

Date of Testing : 11.08.2017

Material Type : Wet Mix Macadam

Sample Location : At Site

As per MORTH Table 400-13

Sl. No.	Particulars	Test Results	Standards as per Specifications
1	Liquid Limit	22.00	-
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

All above informations are furnished by Agency

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Job No.: CQCE/BBMP/RM/W No.13/2017-18

16.08.2017

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
Agency	**Sri. R. Mangalraj,** Contractor,Bangalore.
Name of Work	Improvements to main & Cross Road at Selection Corner area & Santhosh Nagar (Balance Roads) in Ward No. 13, in Shettyhalli Sub Division, BBMP, Bangalore.
Reference	EE/DD/W.O/128/2016-17 Dated:23.02.2017
Technical Reference	IS 2386(Part 1) 1963 (RA 2007)
Type of Mix	Bituminous Concrete
Date of Testing	16.08.2017

Result : Flakiness Index = **13.85%**

Elongation Index = **14.21%**

Result : Combined Flakiness & Elongation index **28.06%**

Comments:

→ Maximum allowable Flakiness & Elongation Index for Bituminous Concrete is 30%

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Job No.: CQCE/BBMP/RM/W No.13/2017-18 17.08.2017

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE

CLIENT	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
AGENCY	**Sri. R. Mangalraj,** Contractor,Bangalore.
NAME OF THE WORK	Improvements to main & Cross Road at Selection Corner area & Santhosh Nagar (Balance Roads) in Ward No. 13, in Shettyhalli Sub Division, BBMP,
REFERENCE	EE/DD/W.O/128/2016-17 Dated:23.02.2017
DATE OF TESTING	17.08.2017

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	470	469
3. Weight of Asphalt and Mineral matter Extracted, g	30	31
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	30	31
7. Bitumen content in %	6.00	6.20
8. Average	**6.10**	

GRADATION AFTER EXTRACTION

TABLE - 1

SIEVE SIZE	Percent Passing, %		JOBMIX
mm	Sample 1	Sample 2	Gradation
19	100.00	100.00	100
13.2	96.35	97.14	79-100
9.5	83.36	94.15	70-88
4.75	66.85	65.25	53-71
2.36	52.25	53.41	42-58
1.18	41.85	42.63	34-48
0.6	30.36	31.85	26-38
0.3	23.28	24.63	18-28
0.15	16.32	17.41	12-20
0.075	6.35	7.41	4-10

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